UNITED STATES PATENT AND TRADEMARK OFFICE

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WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)
CIRA CENTRE, 12TH FLOOR
2929 ARCH STREET
PHILADELPHIA, PA 19104-2891

EXAMINER
PATEL, NIRAV B

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 October 2008 (RCE)</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2,4-26 and 34</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>2,4-26 and 34</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1. Applicant's submission for RCE filed on Oct. 22, 2008 has been entered. Claims 2, 4-26, 34 are pending. Claim 3 is canceled and claims 18, 34 are amended by the applicant.

Claim Objections

2. Claims 16 and 17 are objected to because of the following informalities:

Claim 16 is objected as being a substantial duplicate of claim 17.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 34, 5, 9, 10-13, 16-18, 20-22, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oe et al (US Pub. No. 2002/0099837) in view of Bodrov (US Patent No. 6,802,006) and in view of Rothrock et al (US Patent No. 7,181,603).

As per claim 34, Oe teaches:

an input device that receives a command input from a user to display information from an object model via a software application having an application commander [Fig. 2, 4, 5, paragraph 0219, 0221, 0240], wherein upon a command from the commander to execute the executable file, wherein, in response to an application request for information from the object model; the application commander accesses the security agent rather than the object model [Fig. 2, paragraph 0221, 0240, 0362, 0365] and the security agent limits access to the object model before accessing the requested information from the object model; and a computer monitor that display the requested information, wherein the requested information from the object model is provided by the security agent to the application commander if the request for information does not act to expose the object model in a non-obfuscated form [Fig. 9, 10, paragraph 00362, 00365, 0366, 0372, 0388, 0389].

Oe teaches creating/generating the protected digital information as shown in Fig. 13C, 14, which is loaded into the memory of the computer [paragraph 0399-0404, 0406].

Bodrov teaches:

a compiled executable file having an executable image file source, an executable security source (validator) and an executable loader [Fig. 2], wherein upon a command from the commander to execute the executable file, a loader is instantiated in a memory of the computer using the executable loader, the loader instantiating in the memory of the computer, an object model using the executable image source, a security agent using the security source, the security agent controlling access to the object model as

instantiated in the memory of the computer [Fig. 2, 3, col. 3 lines 43-60, col. 4 lines 1-15].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bodrov with Oe, since one would have been motivated to verify the identity of a software application in a dynamic loading environment [Bodrov, col. 1 lines 34-36].

Bodrov teaches the pointer and import table to refer the appropriate data and/or code portion as shown in Fig. 3 and 4.

a security agent is instantiated in the memory of the computer; the security agent for controlling access to the object model as instantiated in the memory of the computer [Fig. 1 col. 2 lines 47-49, col. 5 lines 30-41, col. 7 lines 26-29], upon a command from a commander to execute the executable file to instantiate the persisted object model, the loader for instantiating the object model in the memory from the image source, instantiating the security agent in the memory from the security source, and returning to the commander a first reference for the instantiated security agent to point to the object model and a second reference for the application commander to point to the instantiated security agent [Fig. 1, 4, 5 col. 5 lines 30-41, col. 7 lines 19-67]. Further, Rothrock teaches that one or more software modules are loaded into the memory along with the main player executable files [col. 4 lines 30-33].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Rothrock with Oe and Bodrov, since one would have been motivated to protect function calls between program modules by redirecting

function call through a protected environment to effect secure linkage of program modules [Rothrock, col. 1 lines 9-10, col. 2 lines 16-17].

As per claim 5, the rejection of claim 34 is incorporated and Oe discloses:

The security agent does not pass on to the object model a type of command that would expose the object model in a non-obfuscated form [paragraph 0372, 0388, 0389].

As per claim 9, the rejection of claim 34 is incorporated and Rothrock discloses:

the loader instantiates the security agent as part of the object model [Fig. 2, 3].

As per claims 10-13, they are method claims corresponds to system claim 34 and are rejected for the same reason set forth in the rejection of claim 34 above.

As per claims 16-17, they are method claims corresponds to system claim 9 and are rejected for the same reason set forth in the rejection of claim 9 above.

As per claims 18, 20-22, they are medium claims corresponds to system claim 34 and are rejected for the same reason set forth in the rejection of claim 34 above.

As per claim 26, it is medium claim corresponds to system claim 9 and are rejected for the same reason set forth in the rejection of claim 9 above.

4. Claims 2, 4, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oe et al (US Pub. No. 2002/0099837) in view of Bodrov (US Patent No. 6,802,006) in view of Rothrock et al (US Patent No. 7,181,603) and in view of Golan (US Patent No. 5,974,549).

As per claim 2, the rejection of claim 34 is incorporated and Golan discloses:

the executable file is compiled by a compiler from a C-type programming language object model document [col. 9 lines 56-67, col. 10 lines 1-18, Fig. 4].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Golan with Oe, Bodrov and Rothrock, since one would have been motivated to prevent the security breaches by monitoring the execution of the software component to [Golan, col. 1 lines 13-28].

As per claim 4, the rejection of claim 34 is incorporated and Golan discloses:

the instantiated security agent passes on each command (i.e. API call) from the commander to the object model unless such security agent deems such command to be of a type that should not be so passed on [col. 2 lines 43-47, 67, col. 3 lines 1-3].

As per claim 19, it is medium claim corresponds to system claim 2 and are rejected for the same reason set forth in the rejection of claim 2 above.

5. Claims 6, 7, 14, 15, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oe et al (US Pub. No. 2002/0099837) in view of Bodrov (US Patent No. 6,802,006) in view of Rothrock et al (US Patent No. 7,181,603) and Masaki et al (US Patent No. 6,980,308).

As per claim 6, the rejection of claim 34 is incorporated and Oe discloses: blocking the API calls (i.e. commands) by the security monitor as shown in Fig. 2.

Masaki teaches: if the degree of matching with the specified pattern is large (i.e. expose the object with a level of granularity finer than a pre-defined maximum), sends a print inhibition command to the printer driver to stop the transmission of the print data (i.e. does not pass a command) [col. 4 lines 1-5, col. 3 lines 9-13, Fig. 7].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Masaki with Oe, Bodrov and Rothrock, since one would have been motivated to provide the security [Masaki, col. 1 line 13].

As per claim 7, the rejection of claim 34 is incorporated and Oe discloses:

allowing the API calls (i.e. commands) by the security monitor that are permitted according to the security policy [Fig. 2].

Masaki teaches: the pattern detector does not detect a specified pattern (i.e. expose the object with a level of granularity coarser than the pre-defined maximum), sends a print

permission command to the printer driver to start the transmission of the print data (i.e.

passes a command) [col. 3 lines 1-7, Fig. 7].

As per claim 14, it is method claim corresponds to system claim 6 and are rejected for

the same reason set forth in the rejection of claim 6 above.

As per claim 15, it is method claim corresponds to system claim 7 and are rejected for

the same reason set forth in the rejection of claim 7 above.

As per claim 23, it is medium claim corresponds to system claim 6 and are rejected for

the same reason set forth in the rejection of claim 6 above.

As per claim 24, it is medium claim corresponds to system claim 7 and are rejected for

the same reason set forth in the rejection of claim 7 above.

6. Claims 8 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Oe et al (US Pub. No. 2002/0099837) in view of Bodrov (US Patent No. 6,802,006) in

view of Rothrock et al (US Patent No. 7,181,603) and in view of Dutta et al (US Pub.

No. 2002/0138727).

As per claim 8, the rejection of claim 34 is incorporated and Dutta teaches: the loader

instantiates the security agent (i.e. class public ServerClassM) separately from the

object model (i.e. Class public ClientClassA or Class public ClientClassB) [Fig. 4A, paragraph 0047, 0048, 0050].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Dutta with Oe, Bodrov and Rothrock, since one would have been motivated to provide secure access control [Dutta, paragraph 0009 lines 4-5].

As per claim 25, it is medium claim corresponds to system claim 8 and are rejected for the same reason set forth in the rejection of claim 8 above.

Response to Amendment

7. Applicant has amended claims 34 and 18, which necessitated new ground of rejection. See new ground of rejection above.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIRAV PATEL whose telephone number is (571)272-5936. The examiner can normally be reached on 8 am - 4:30 pm (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. P./
Examiner, Art Unit 2435
/Kimyen Vu/
Supervisory Patent Examiner, Art Unit 2435